

**ABSTRACT**

A cured ablative composite assembly comprises a housing enclosing a pair of  
ablative composite sub-assemblies joined by a film adhesive. The cured ablative  
5 composite assembly is made by surface treating both ablative composite sub-  
assemblies in preparation for joining; coupling one ablative composite sub-assembly  
to another ablative composite sub-assembly with a film adhesive and enclosing the  
uncured ablative composite assembly within a housing; and depositing the  
combination of the housing and uncured ablative composite assembly in a ventilated  
10 oven with a load applied to the combination housing and uncured ablative composite  
assembly. The film adhesive is cured providing a portion of a hot gas valve suitable  
for use in tactical missiles. The film adhesive does not erode at the high temperatures  
(5000° F) encountered in hot gas rocket exhausts, thereby providing a seal that offers  
high strength, pressure-tight joints.